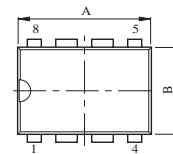
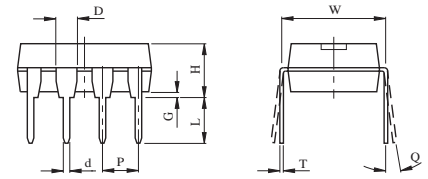
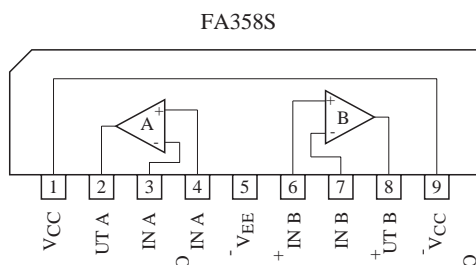
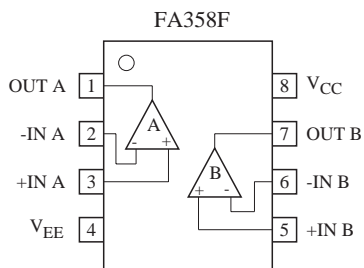
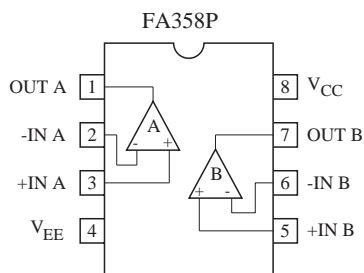


DUAL OPERATIONAL AMPLIFIER

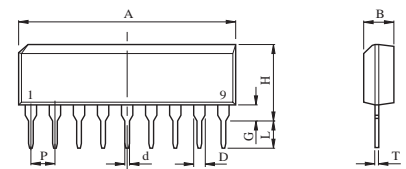
- In the Linear Mode the Input Common Mode Voltage Range Includes Ground.
- Two Internally Compensated OP Amps are in Single Package.
- Low Power Dissipation and Power Drain Suitable for Battery Operation.
- Differential Input Voltage Range Equal to the Power Supply Voltage.
- Wide Power Supply Voltage Range and Signal Power Supply
: Single Supply $3V_{DC}$ to $36V_{DC}$ Dual Supplies $\pm 1.5V_{DC}$ to $\pm 18V_{DC}$
- Large Output Voltage Swing : $0V_{DC}$ to $V_{CC}-1.5V_{DC}$
- Low Input Biasing Current : $I_I=45nA_{DC}$ (Typ.)
- Possible to Exchange the Position of Pin⑨ for Pin①
Because of Pin Connection Being Symmetric. (FA358S only)
- The Pin① and Pin⑨ of Lead Frame was Each Other Connected. (FA358S Only)

PIN CONNECTION (TOP VIEW)



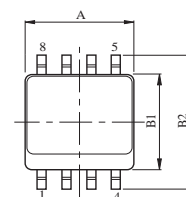
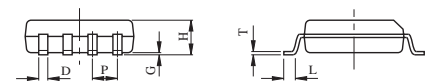
| DIM | MILLIMETERS |
|-----|----------------|
| A | 9.6±0.2 |
| B | 6.45±0.2 |
| D | 1.52±0.1 |
| d | 0.46±0.1 |
| G | 0.50 MIN |
| H | 3.8±0.3 |
| L | 3.3±0.3 |
| P | 2.54 |
| T | 0.25+0.1/-0.05 |
| W | 7.62 |
| Q | 0-15° |

DIP-8



| DIM | MILLIMETERS |
|-----|----------------|
| A | 22.48±0.2 |
| B | 3.2±0.2 |
| D | 1.2±0.25 |
| d | 0.5±0.1 |
| G | 1.95±0.2 |
| H | 7.7±0.3 |
| L | 3.2±0.3 |
| P | 2.54 |
| T | 0.25+0.1/-0.05 |

SIP-9



| DIM | MILLIMETERS |
|-----|----------------|
| A | 4.85±0.2 |
| B1 | 3.94±0.2 |
| B2 | 6.02±0.3 |
| D | 0.4±0.1 |
| G | 0.15+0.1/-0.05 |
| H | 1.63±0.2 |
| L | 0.65±0.2 |
| P | 1.27 |
| T | 0.20+0.1/-0.05 |

SOP-8



FA358P/S/F

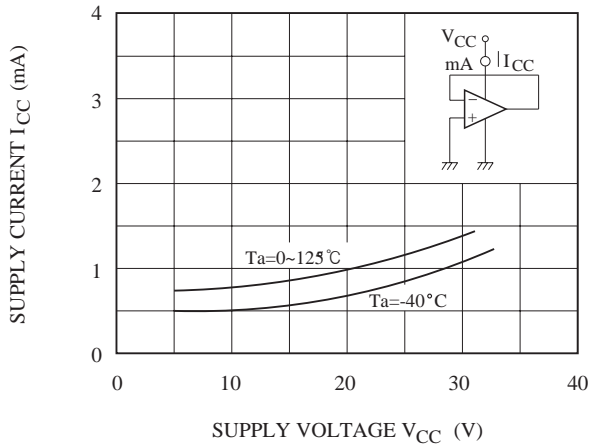
MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|------------------------------|----------|-----------|--------------|------|
| Supply Voltage | | V_{CC} | 32, ± 16 | V |
| Differential Input Voltage | | DV_{IN} | ± 32 | V |
| Input Voltage | | V_{IN} | -0.3 ~ 36 | V |
| Power Dissipation | FA358P/S | P_D | 500 | mW |
| | FA358F | | 280 | |
| | FA358FK | | 200 | |
| Operating Temperature | | T_{opr} | -40 ~ 125 | °C |
| Storage Temperature | | T_{stg} | -55 ~ 125 | °C |
| Pin① to Pin⑨ Maximum Current | FA358S | I_{max} | 1 | A |

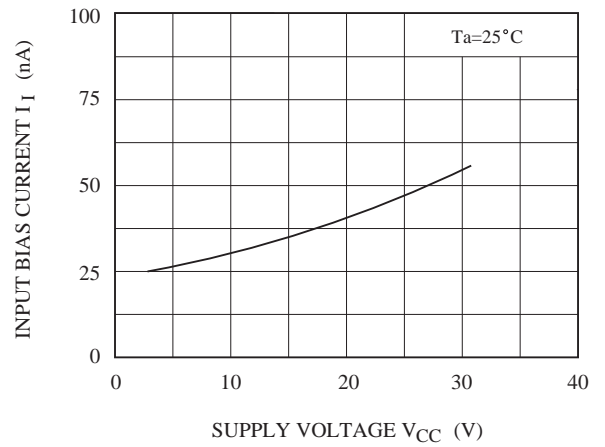
ELECTRICAL CHARACTERISTICS (V_{CC}=5V, V_{EE}=GND, Ta=25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--|------------------|---|------|------|------|------|
| Input Offset Voltage | V_{IO} | $R_g \leq 10k\Omega$ | - | - | 5 | mV |
| Input Offset Current | I_{IO} | - | - | - | 50 | nA |
| Input Bias Current | I_I | - | - | 45 | 210 | nA |
| Common Mode Input Voltage | CMV_{IN} | $V_{CC}=30V, V_{EE}=GND$ | 0 | - | 28 | V |
| Supply Current | I_{CC}, I_{EE} | $R_L = \infty$, All OP Amps | - | 0.7 | 1.2 | mA |
| Voltage Gain | G_V | $R_L \leq 2k\Omega$ | 86 | - | - | dB |
| Maximum Output Voltage Swing | V_{OP-P} | $R_L=2k\Omega, V_{CC}=30V$ | 26 | - | - | V |
| Common Mode Input Signal Rejection Ratio | CMRR | $V_{CC}=30V, R_S=10k\Omega$ | 65 | - | - | dB |
| Supply Voltage Rejection Ratio | SVRR | $R_g=10k\Omega, V_{CC}=30V$ | 65 | - | - | dB |
| Source Current | I_{source} | -IN=0V _{DC} , +IN=1V _{DC} | 10 | - | - | mA |
| Sink Current | I_{sink} | -IN=1V _{DC} , +IN=0V _{DC} | 10 | - | - | mA |

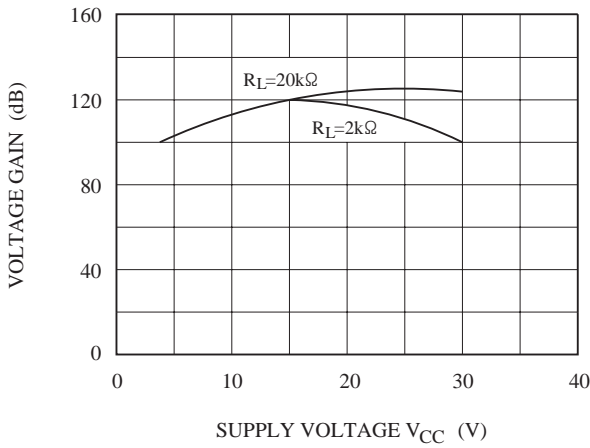
$V_{CC} - I_{CC}$



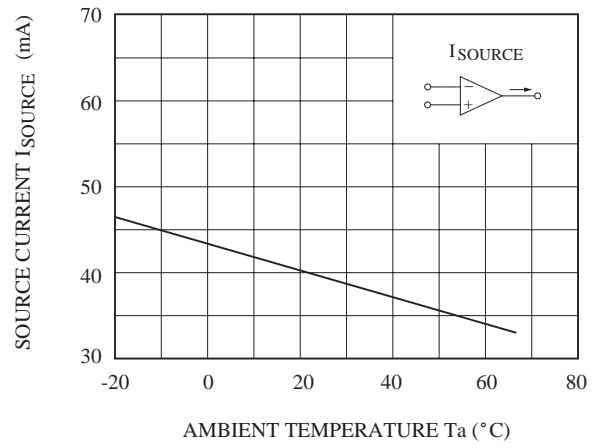
$V_{CC} - I_I$



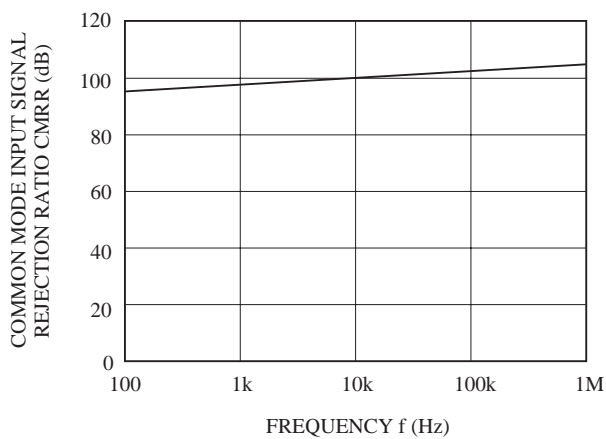
$V_{CC} - G_V$



$I_{SOURCE} - T_a$



CMRR - f



$G_V - f$

